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Worldwide Report

ENVIRONMENTAL QUALITY

No. 286

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2 February 1981

WORLDWIDE REPORT

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SYMPOSIUM TOLD OF SERIOUS EROSION PROBLEMS ALONG YANGTZE

Beijing GUANGMING RIBAO in Chinese 10 Nov 80 p 2

[Article by Guo Tingfu [67511694 6534]: "Soil and Water Conservation Workers Appeal for the Adoption of Effective Measures To Improve the Ecology of Some Areas of the Changjiang Valley"]

[Text] At the Water and Soil Conservancy Symposium called not long ago by the Ministry of Water Conservancy, water and soil conservation workers of several provinces in the middle reaches of the Changjiang [Yangtze River] reported that the ecology of some areas of the Changjiang valley has been catastrophically damaged, and the said the state should adopt effective measures to improve the environment of these areas.

Those who participated in the discussion pointed out that in the past 3 decades, the ecology of some areas of the Changjiang valley has suffered extremely serious destruction. Especially during the 10 years of severe disaster, large areas of forests were cut down and the problem of erosion grew more critical. In severe erosion areas of Jiangxi Province, the depth of the topsoil washoff is 4 cm per year. It is calculated that each year, the loss of soil in the province reaches more than 160 million tons. The nitrogen, phosphorus, and potassium fertilizer lost with the soil is about 1.39 million tons. This loss seriously affects agricultural, forestry, and animal husbandry production. In Phinzhou District of Hunan Province, about 7 million mu of farmland are threatened by erosion, resulting in an average reduction in yield of 100 jin per mu. The reduction in yield may reach 200-300 jin in those fields that are more seriously damaged.

The soil and water conservancy workers went on to report the soil and water losses in some areas of the Changjiang valley. They said that the soil and water losses have reduced the efficiency of some of the water-conservation and hydroelectric engineering structures along some large and small tributaries. According to the results of tests conducted by the Water Conservancy Department of Hubei Province, the 178 reservoirs of Huanggang District lose an average of 6 million meters storage capacity per year due to silting. The Baiyutan hydroelectric station in Hunan Province has eight generators with a total capacity of 20,000 kw. Due to obstruction from silting, three of these generators can no longer generate electricity. The silting problem of small mountain reservoirs is even more serious. Some of them have become ineffective due to silting only 2 or 3 years after their construction. Soil and water losses are seriously interfering with the navigation of some streams

and lakes in the Changjiang valley. In the 20 years from 1956 to 1975, the average silt content of the five rivers of Gan, Wu, Xin, Yao, and Xiu was 23 percent higher in the second decade than in the first. The sand content of the Poyanghu [lake] increased 29 percent and brought 21.7 percent more sand into the Changjiang during the same period of time. Due to silting of the channels, the total navigable waterways of Jiangxi Province were 977 km less in 1978 than in 1957.

Participants at the symposium pointed out that the areas of the Changjiang valley are so vast that they amount to 20 percent of China's land area. An improvement in the ecological balance of the Changjiang valley is extremely important for the realization of agricultural modernization in the country. Thus they suggest that leaders at all levels should pay attention to this problem, and ways should be found to slow down the soil and water losses in the Changjiang valley.

6168

CSO: 5000

LARGE STEEL FIRM FINED 300,000 YUAN FOR POLLUTING RIVER

Beijing GUANGMING RIBAO in Chinese 5 Nov 80 p 2

[Article by Wang Xingzhong [3769 5281 0022]: "Serious Heavy Oil Pollution in Rivers Threatens Human Health"]

[Text] The largest steel enterprise of Hunan Province, the Xiangtan Steel and Iron Mill, was fined 300,000 yuan for seriously polluting the Xiangjiang with heavy oil. Related leaders of the mill who were responsible for this accident were also fined.

In late July of this year, 15 barrels of heavy oil, weighing 750 tons, were being shipped to a branch of the Xiangtan Steel and Iron Mill. According to the original plan, the 400-500 tons of heavy oil stored in the No 3 storage tank were to be transferred to the No 5 ground surface high-level storage tank, leaving the No 3 tank empty in order to store the newly arrived oil which was waiting to be unloaded. As the oil was being pumped in, the valve of a nearby tank was not closed, causing the oil which was being pumped into the No 3 tank to enter the No 2 tank. Consequently, a large quantity of heavy oil gushed out of the top of the No 2 tank in six places and into the water of the Xiangjiang, causing the oil content of the polluted water surface to be 140-1,000 kg per 1,000 m². After the accident, the mill did not send out a warning, did not report it to the environmental protection and monitoring department, and did not adopt effective measures to remedy the disaster. Based upon the state's environmental protection law and related provincial regulations, the Xiangtan Municipal Revolutionary Committee resolved to fine the mill 300,000 yuan and to collect from it a 25,000 yuan accidental discharge fee as well. A deputy head of the mill in charge of production and the head of the branch mill were fined 50 and 30 yuan, respectively. Meanwhile, those who discovered the accident and sent a timely report to their superiors were praised and given monetary awards by the Municipal Revolutionary Committee.

6168
CSO: 5000

POLLUTION CONTROL WORK CONTINUING IN SHANDONG

Beijing GUANGMING RIBAO in Chinese 20 Oct 80 p 2

[Article by Wang Ziqiang [3769 1311 1730]: "Increasing Production and Controlling Pollution While Integrating Enterprises"]

[Text] The production equipment of the more than 60 subordinate factories and enterprises of the Jinan Municipal Bureau of Light Industry No 1 is all relatively simple and crude, and there is a great deal of wasted resources and energy. Moreover, these enterprises are located mostly in the center of the city, and with a few of them in the suburbs in the upper reaches of the prevailing wind streams; therefore, the condition of pollution is serious. Most recently, these problems have been taken under consideration with the combined viewpoints of production and ecology for the purpose of adopting effective measures, under the principle of not spending any money or spending very little money, to push for unity, to promote production, and to protect the environment, so as to achieve all three with one action.

The specific measures are as follows: (1) Combine enterprises that are free of pollution or pollute very slightly with those enterprises that are severe polluters and need to be closed; this will simplify the administrative organization so as to utilize the plant, the equipment, and the labor force reasonably. (2) Combine those enterprises that are difficult to develop in the city with those capable of development in the suburbs; this will enable the new plant to reduce transportation expenditures and make room for the installation of new equipment. (3) Combine those enterprises that are discharging residual heat into the atmosphere with those that are suffering from a lack of heat energy; this will achieve unity of heat supply and gas utilization. (4) Combine those enterprises that are discharging acids and alkalis with those that use acid and alkali solutions for production; this will unite the utilization of resources and transform damages into benefits. (5) Combine the electroplating and print-platemaking enterprises that are seriously polluting and are scattered about, which makes them difficult to control; this will thereby establish production centers for improving work procedures, equipment, and management.

The above measures have many advantages. For example, the products of the Jinan Battery Plant have not been selling very well, and its pollution problem is quite severe. A capital investment of 700,000 yuan is needed to treat the pollution problem, but the plant cannot afford it. If the plant is to be moved elsewhere, the cost will be even greater and the problem of pollution will remain unsolved. On

the other hand, the products of the Jinan Hongqi Boiler and Furnace Plant are selling very well. The plant has more orders than it can produce all of the coming year. It would very much like to expand, but available land and buildings are limited. The leaders of this plant are very concerned.

Upon investigating, the Bureau of Light Industry No 1 learned of these conditions. The leaders of the bureau have suggested that the battery plant merge with the Hongqi Boiler and Furnace Plant to produce boilers and furnaces together. The leaders and workers of the two plants have been brought together to plan the merger. It is estimated that after the merger, new equipment may be installed and production expanded. The annual value of the products will double, and the profit will be 1.5 times higher. In addition, orders will be delivered sooner. This merger will promote the production of factories and mines, will be favorable for environmental protection, and will increase the income of workers of the two plants as well. As such is the case, both plants have come to an agreement very quickly to combine production.

There is another type of joint action, and that is to supply the waste from one plant to be used by another to transform damage to benefit. For example, the Jinan No 1 Printing and Dyeing Plant treats its alkali-containing wastewater and delivers it to the Shandong Paper Mill West Plant to be used there, while the diluted sulfuric acid discharged by the Shandong Paper Mill West Plant is delivered to the Changqing County Phosphorus Fertilizer Plant to produce calcium phosphate. This kind of coordination is being urgently carried out.

6168

CSO: 5000

ELECTROPLATING CENTER USES ADVANCED METHODS TO TREAT WASTE WATER

Beijing GUANGMING RIBAO in Chinese 25 Oct 80 p 2

[Article by Xu Jiuwu [1776 0046 2976]: "Advanced Methods Used To Treat Waste Water To Reduce Environmental Pollution"]

[Text] The electroplating center in Qinhuangdao began its construction toward the end of last year and was completed most recently. Production at the center has begun and the new cyan-free electroplating technique was adopted. The relatively advanced method of ion exchange is used to treat the waste water to meet the state's discharge standards. As the production of the electroplating center expands step by step, the metal pollution problems caused by the waste water of electroplating in regions of Beidaihe, Qinhuangdao, and Shanhaiguan may be basically resolved.

In the city of Qinhuangdao, originally the electroplating industry was located in 26 places, which used old work processes and the waste water contained a large quantity of harmful substances. The chromium-containing waste gas produced in the electroplating process was directly discharged into the atmosphere without treatment. The serious pollution directly affected the fish resources of the nearby sea, the domestic marine product culture, and rendered the water of the several streams of the city and 80 percent of the wells on both their banks unfit for drinking. Repeated survey studies by the related departments of Qinhuangdao City demonstrated that due to the fact that the electroplating industry was scattered in many locations, a great deal of capital was needed for waste treatment and it would be difficult to be thorough. These departments therefore decided to convert the original automobile assembly plant's electroplating machine shop into a new electroplating center to take on all the city's electroplating jobs to replace, step by step, all the original electroplating locations.

The newly constructed electroplating center does not have five assembly lines. There are all varieties of electroplating and the original backward condition of manual production style is eliminated. For example, originally, copper, nickel, and chrome plating was done three different times and in the entire process there were three polishing processes as well. The quality was not stable. Now, the technique of one step copper, nickel, chrome plating using smooth, bright, and flat plating fluid has been adopted. Productivity has greatly improved.

The electroplating center also has a special waste water treatment station which is capable of treating four types of liquid wastes effectively and is also capable of preparing pure water. The total treatment capacity is 100 tons/hour. After treatment, the heavy metal contents of the liquid wastes are lower than the discharge standards of the state. A portion of the liquid wastes may also be reused.

6248

CSO: 5000

HANGZHOU BAY FISHING INDUSTRY HARD HIT BY POLLUTED INDUSTRIAL WASTE WATER

Beijing GUANGMING RIBAO in Chinese 22 Oct 80 p 2

[Article by Shanghai Petrochemical Main Plant]

[Text] Comrade Editor: We--the Taihu Commune of Shengsi County, Zhejiang Province--are located in the entrance of Hangzhou Bay. This is a small island engaged primarily in sea fishing. Such economic fish as the mullet, the silvery pomfret, shark, white shrimp, yellow croaker, and jellyfish had always been plentiful. In recent years, however, fingerlings of mullet and yellow croaker are no longer to be seen and yields of silvery pomfret and shark have also dropped about 60 percent. The reduction of the yield and the quality of jellyfish are especially terrifying. In 1975, during one autumn flood season, the yield of jellyfish from the 200 nets of the commune was more than 2,800 dan. The yield has been less and less every year while the quality of the catch has become poorer. The autumn floods of last year brought only 600 dan. The cause is the industrial waste water coming from Shanghai and some factories of Zhejiang Province. The industrial waste water and oil discharged into the sea contain a much higher rate of toxic substances than the standard set by the state and they have killed various fingerlings. We are here to beseech you to help us appeal to the related departments of Shanghai, Zhejiang, et al to adopt measures to reduce or cease discharges of industrial waste water to the sea, otherwise the fishing industry of these Zhoushan Islands will be thoroughly destroyed. [signed] Taihu Commune Revolutionary Committee, Shengsi County, Zhejiang Province

Department of the Laboring Masses:

The letter written to your newspaper entitled "Serious damage to the fishing industry of our island by industrial waste water" has been forwarded to us by the Shanghai Municipal Committee of the Central Communist Party. We extend our profound sympathy to the fishing industry of Taihu Commune of Shengsi County, Zhejiang Province for the yield reduction.

The Zhoushan Islands of Hangzhou Bay form a region famous for fishery in China. As we understand the situation, the current pollution problem of Hangzhou Bay involves the following aspects: (1) The Qiantangjiang carries untreated waste water in large quantities discharged by factories of its banks. (2) the waste oil is discharged by the motorized boats and ships into Hangzhou Bay, especially by the fishing boats into the Zhoushan Fishing Ground when the marine products are being caught. (3) According to the Zhejiang Provincial Environmental Protection Office, the runoff oil discharged accidentally during demolishing of old used boats at Zhapu Ship Demolishing

Plant sometimes amounted to more than 30 tons per accident. (4) The Zhejiang Petroleum Refinery discharges 80,000 tons of treated waste water per day; the oil content of this waste water is being investigated. (5) Our plant treats 500,000 tons of industrial waste per day with 960,000 tons of clear water discharge. Under the condition of occasional accidents, some leaks may occur. (6) The City of Shanghai and the Chang Jiang bring over a large quantity of waste water. Due to the effects of the tide and currents, it flows into Hangzhou Bay along the northern part of the bay. (7) The agricultural drugs used in the fields in the valleys of Qiantangjiang, Yongjiang, and Caojing, et al within the Hangzhou Bay region are washed off into the bay.

In view of the above conditions, we suggest that the state's Environmental Protection Office and the states General Bureau of Marine Products should be in charge of organising a joint survey by related units in Jiangsu and Zhejiang provinces and Shanghai City to exchange data and to proceed with joint environmental protection work so that scientific research work may be carried out to control pollution in the region of Hangzhou Bay to restore its ecological balance for the development of the fishing industry. Our plant is willing to join the efforts of surveying and pollution control and treatment and to contribute to the implementation thereof.

[signed] Shanghai Petrochemical Main Plant

6168

CSO: 5000

BRIEFS

WATER POLLUTION CONTROL--With the Yunnan Vinylon Plant, located at the source of the Nanpanjiang, in full operation, 3,000 tons of wastewater containing formaldehyde are being discharged every day into the Nanpanjiang, which measures 865 km in length and flows through a dozen counties of the three provinces of Yunnan, Guangxi, and Guizhou. Will the Nanpan valley be polluted? Recently successful research into using activated carbon to deep-treat formaldehyde waste has removed this worry. Formaldehyde is a gas that is easily dissolved in water, and is colorless, poisonous, and irritating. It is toxic to the nerves of people and animals. Other vinylon plants in China usually treat their formaldehyde wastewater twice and then dilute it with a large quantity of clear water to meet the density standards of the state before discharging it into streams. This method requires a large quantity of water, while the formaldehyde content will concentrate along the edges of the streams to pollute the environment. For this reason, the Yunnan Provincial Vinylon Plant began in December 1978 to experiment with an intermediate stage of using activated charcoal to deep-treat the formaldehyde wastewater. After a year and a half of efforts, the experiment reached success in June of this year. This technique is capable of treating a large quantity of formaldehyde wastewater. It uses simple equipment and a simple work procedure, and the cost of the treatment is relatively low. [Text] [Beijing GUANGMING RIBAO in Chinese 20 Oct 80 p 2] 6168

SWAGE TREATMENT FOR HOSPITALS--On 15 and 16 October, the city's Bureau of Environmental Protection organized related persons to proceed with technical certification of China's first small chlorine sewage disinfecting device for hospital use. Those who participated in the certification conference considered the device to have the advantages of being simple and safe, requiring a small investment to produce relatively stable disinfection effects. The successful research and manufacture of this disinfecting instrument has provided an effective means to treat the sewage of small hospitals and outpatient clinics in China. At present, the city has more than 2,800 small hospitals and outpatient clinics with less than 20 beds. Every day, these hospitals and clinics discharge a large quantity of sewage containing pathogenetic microbes. This sewage is generally discharged into nearby ditches without being treated. Early this year, the Beijing Municipal Construction Designing Academy, the Designing Institute of Beijing Bureau of Railways, the Designing Academy No 7 of the Seventh Ministry of Machines, the Special Designing Academy of the Ministry of Railways, and the Beijing Municipal Warm Springs Tuberculosis Hospital jointly organized a Beijing Municipal Hospital Sewage Treatment Research Team to begin to study to make a small hospital sewage chlorine disinfecting device. The five engineers, Xiao Zhenghui [5135 2973 6540], Liu Wenbin [0491 2429 7001], Zhang Weicheng [1728 3634 1004], Lu Ankian [4151 1344 1017], Wang Shicong [3769 0013 5115] and related scientists of the Warm Spring Hospital cooperated closely to carry out repeated studies and experiments. After more than 1,000 analyses of experimental data and equipment revisions, the instrument was finally successfully made. [Text] [Beijing BEIJING RIBAO in Chinese 18 Oct 80 p 1] 6248

CSO: 5000

DAM ON AGNO RIVER TO COUNTER MINING POLLUTION

Manila DAILY EXPRESS in English 10 Jan 81 p 3

[Text]

BAGUIO CITY - A P15 billion dam will be constructed in the next five years at the Lower Agno River basin in San Manuel, Pangasinan, to solve the perennial mining pollution problem in Northern Luzon.

The multi-billion-peso project will be constructed by the National Power Corp., Bureau of Mines and Geo-sciences, National Irrigation Administration and other government agencies, in cooperation with mining companies in Benguet province.

The Bureau of Mines and Geo-sciences regional office in Baguio said the multi-purpose project will also be used to generate additional electric power for the region, help prevent floods in the lowlands, and store water for irrigation purposes, aside from serving as a depository for mine tailings.

THE CONSTRUCTION of the huge dam adjacent to the Agno river was agreed upon by an inter-agency committee looking into the solution of the perennial mining pollution problem in the area.

Several proposals were made but the inter-agency committee chose only one, the dam project in San Roque.

Serving as another source of power for Northern Luzon, the project will boost

the electricity presently generated by the Ambuklar and Bingsa dams.

...

PROVINCIAL officials of Pangasinan look forward to the multifarious benefits derived from the San Roque dam project.

Gov. Aguedo F. Agbayani has endorsed the construction of the project as he cited that about 26 percent of the fertile agricultural lands in his province are now unproductive due to siltation.

The mine wastes are products of mining operations in the southern part of Benguet. Despite regulations protecting the throwing of wastes down the river, many mining companies still dump their wastes in the rivers.

...

THE FIVE mining companies reportedly involved in the San Roque dam project are the Benguet Consolidated Corp., Philex Mines, Itogus-Suyoc Mines, Black Mountain Inc. and Benguet Exploration.

About seven years ago, these mining firms and the presidential regional office for development helped build a plant to construct a giant pipeline from Benguet to Pangasinan's Lingayen Gulf.

However, the plan was aborted because of its prohibitive cost. This gave the green light to the San Roque dam project, an alternative project with the NPC and the mines bureau as leading agencies. (PNA)

BRIEFS

POLLUTED BEACHES--Tons of waste water dumped into the ocean have dangerously polluted our beaches, especially along the Costa Verde section. Pathogenic bacteria present in the water could produce gastrointestinal infections. The greatest risk lies in the fact that this organic waste transmits bacteria that is destroying the aquatic life of our beaches, turning it into carriers of eye, ear and gastric infections. The Allergic Disease Institute has revealed that the main bacterium that has increased on our beaches is salmonella, which can even cause typhoid fever. The Latin American Center of Bacteriological Research has also announced that Coli and Proteus Bulgares bacteria, which cause diarrhea, have been found. Domingo Mondragon Chuquisongo, member of the Inter-American Association of Sanitary Engineering, has previously made statements about the pollution of our beaches in the capital. He said that the basic requirement is to divert the waste water now dumped along La Chira Beach, as well as public baths and showers, so as to ensure sanitary conditions for summer vacationers. However, these warning were not heeded by municipal or health authorities and to date, there is an imminent risk for persons visiting the beaches. [Text] [Lima EXPRESO in Spanish 21 Dec 80 p 69] 11,464

POLLUTION THREATENS RIVERS--The Rimac River has no ecological life. Nor do others that empty into the ocean along our coasts. The Mantaro River has no aquatic flora or life. This situation was explained by Domingo Mondragon Chuquisongo, secretary general of the Chapter of Sanitary Engineers of the College of Engineers of Peru, who revealed that most Peruvian rivers have lost their ecological life and that their degree of pollution is in many cases alarming. Mondragon said that the main causes of pollution include the dumping of waste water, washings from mining centers and toxic waters which kill flora, waste from many industries and factories that use chemical substances, and others. He cited the case of the Rimac River, which has lost its vast ecological life due to the fact that waste matter is dumped into its waters. He also mentioned the Vitor and Camana rivers, famous for their shrimp, as being affected by pollution. Mondragon also said that the situation is alarming in the Mantaro and Noche rivers, which are found near mining centers. He supports the existence of a program to control river pollution, which would also aim at the rehabilitation of aquatic life through special attention to causes of the destruction of river life. [Excerpt] [Lima EL COMERCIO in Spanish 13 Dec 80 p 3] 11,464

CSO: 5000

MODERN TECHNOLOGY FAILS TO END DROUGHT

Victoria NATION in English 8 Jan 81 pp 3, 5

[Article by Odungo Nyang'ayo]

[Text]

IN the old days, inhabitants of the Sub-Saharan Sahel region of West Africa used traditional methods to find vital pockets of water beneath their arid soil.

The methods had been handed down through generations and although they were primitive, they worked, and above all, they were inexpensive.

But even the traditional water diviners were unable to seek out sufficient water to prevent serious drought which killed thousands of people and cattle in 1972.

And despite the introduction of modern technology by well-meaning international agencies, the drought continues. And research now shows that modern methods of discovering water are expensive, difficult to maintain and thus ineffective. But a misplaced confidence in science means the traditional water diviners are dying out

and the art, acquired over thousands of years, of finding hidden water sources has been forgotten.

This was the conclusion of the recent Congress of the International Water Association which, reacting to a report by a team of French experts, noted that serious drought in the Sahel was as much a result of the introduction of modern technology as the climatic conditions prevailing in the area.

The French experts told the Congress that solar techniques had brought major problems as a solar pump capable of providing each animal in a 500 to 1,000-strong flock with 20 to 30 litres of fresh water, cost between \$125,000 and \$250,000. This made the price of meat produced by Sahel shepherds prohibitive. And the problem was compounded by breakdowns and maintenance difficulties.

They recommended a new approach that sought to involve the local population to a greater extent. In Upper Volta, they pointed out that those drilling for water wanted a motivation study to be carried out among the inhabitants of a village and that a small commercial infrastructure be set up at village level to ensure villagers took responsibility for the running and maintenance of wells.

But while the problems in the Sahel continue, the drought in Africa worsens and its effects have been aggravated by the refugee problem caused by the many continental factional and inter-state wars.

The United Nations Children's Fund (UNICEF) which has been studying the effects of drought and war in Africa, has put the number of people facing death from famine in Africa at 20 million, half of whom are children.

Most of the Sahel region, including Senegal, Mali and Mauritania, has remained dry due to the non-arrival of seasonal rains.

Few showers

The Casamance region of southern Senegal, which is normally wet, has seen only a few sizeable showers. The result, if forecasters' predictions of more dry weather are correct, could be a serious drop in the peanut crop — Senegal's main crop.

Authorities are also distributing food in the country to keep peasants from selling the few remaining seeds for the next planting and the shepherds are bringing the mutton, normally reserved for the Muslim feast of Tabaski, into market four months early.

The situation is even worse in Mali and Mauritania where the drought has lasted several years. Herders and farmers have left and vegetation is disappearing as officials put the fight against the desert's advance above all other urgent state business.

Dry wells

In Djibouti, the former French Somaliland, where it has not rained for two years, the wells are dry and most of the cattle are already dead.

About 80,000 people there have their hands outstretched for help and there are another 25,000 Ethiopians and Somalis in Djibouti who have taken refuge there from troubles in their own areas.

The lack of rain has also hit Ethiopia in the last two years and it is believed the situation is rapidly approaching that of six years ago when 200,000 people starved to death in Wollo Province.

In Somalia, hundreds of thousands of people have fled the war in Ogaden and drought has aggravated the situation to the point that now one out of every four people in Somalia is actually a refugee from war or from drought-provoked starvation.

More than 700,000 of them receive help in 24 refugee camps while another 800,000 live in pitiful hopelessness

outside the camps with little means of survival.

Desert expanse

According to UNICEF, the situation has further been compounded by the lack of a communications network in the large desert expanse.

There are another four million people who could face death in Uganda as a result of drought particularly in the Karamoja District of the North East.

In Kenya, where drought forced the country to import large quantities of maize, wheat and rice, the government is due to spend 30 million Kenya shillings on famine relief supplies for the arid Turkana District in the north-west of the country.

Even Tanzania in the south has not been spared the problems of the region's dry spell. The country's central and northern regions have also seen little rain, prompting the authorities to appeal to the farmers to grow crops which require less rain.

BRIEFS

DAMAGE FROM DEPRESSION "BETTI"—The district of Quissanga was the most seriously affected by the depression "Betti" which hit the province of Cabo Delgado at the beginning of this month, causing extensive human and material damages. Four persons died and two others disappeared, while three were seriously wounded. All the houses in 12 rural communities of a new type were destroyed, and about 500 residences were damaged in 7 communal villages. Some buildings were damaged at the seat of the Quissanga district, among them the administrator's residence and numerous social services structures. Extensive damage was registered in the wake of the depression, such as the total destruction of thousands of cashew trees in the districts of Quissanga and Meluco, where road communications were also cut. A total of 3,000 palm trees were destroyed in the island of Quirimba, and two refrigerated warehouses of the PESCOM company were damaged. [Excerpt] [Beira NOTICIAS DA BEIRA in Portuguese 28 Dec 80 p 1]

CSO: 5000

WATER SHORTAGES, FLOODS REPORTED

Kanyama Flood Disaster

Lusaka TIMES OF ZAMBIA in English 28 Dec 80 p 1

[Text]

HOUSES have begun to collapse in flood-riddled Kanyama township and a Party official has warned that the situation could be worse than the 1977-78 season if it rained heavily again this year.

Chairman of ward 20 Mr Moses Chola who told the *Sunday Times* that three houses had already collapsed demanded that the Party and its Government should take stern measures against the Kanyama disaster fund scandal culprits who bought goods at give away prices.

He said the area had not changed much since the disaster and expressed disappointment that the residents there continued to suffer while "top people" misused funds meant to develop the place.

The people were still puzzled as to what had happened to the funds, Mr Chola added.

Mr Chola said Kanyama residents would be worse off today than they were in 1978 if it should rain heavily.

The drainage was still bad and had been made worse

because the roads were now raised resulting in rain water flowing into houses.

Kanyama had not improved and that the problems which faced the people in 1978 were still there. The only difference was that now if the floods occurred again, there would be more hardships than in 1978.

The houses which collapsed in 1978 had not been repaired.

The ward chairman emphasised that Kanyama would continue to lag behind because of lack of funds. The only development in the compound after large amounts of money had been donated by different countries, was one small drainage; and which was not effective.

On to the Kanyama disaster fund scandal, Mr Chola said the people of Kanyama were anxiously waiting for the police to finish investigations into the matter, adding that it was the hope of the people that once the probe was over, the Party and its Government would step in and punish those involved.

Mr Chola said things might have been different had those involved been common people.

Livingstone Pumping Station Damaged

Lusaka TIMES OF ZAMBIA in English 30 Dec 80 p 1

[Text]

LIVINGSTONE may grind to a halt today because a thunderstorm damaged the town's switch at the Zambezi water pumping station.

So far more than 6,000 residents in the town have had their water supplies cut off as a result of the thunderstorm.

The freak storm has left over 200 families homeless — and the number is expected to rise.

Town engineer Mr Ronald Lwamba warned yesterday that the water now trickling in from reservoirs might dry up today unless Zesco repaired the damaged switch at the council-owned pumping station.

This could grind to a halt the town's industrial and domestic life if all taps dry up.

Mr Lwamba said the switch was repaired after being damaged but it blew up yesterday.

"We do not know what will happen next," he said before meeting town clerk Mr Nelson Mapala and director of housing and social services Mr Willie Selemani.

Mr Mapala said the Sunday night storm was "threatening" and he hoped Zesco

would quickly find a solution to the problem.

The town clerk added that only a few days ago, a storm destroyed or ripped off the roofs of 209 houses in the low-cost area.

The most affected townships were Linda, Dambwa, Libuyu and Maramba. Most of the families were now staying in community development centres while their houses were being repaired, Mr Mapala said.

Concerned

Mr Mapala said council employees, some of whom had been brought in from the high-cost housing maintenance unit were working round the clock to repair the damaged houses.

A sad looking Mr Mapala said: "The council is certainly concerned about these storms."

He said the council was assessing the damage and would announce the figure at a later date.

Mr Mapala said houses in Linda and Libuyu must be phased out, but this was not possible as there were no funds to undertake the project at the moment.

The houses in Linda were built in the 1940s while those in Libuyu were constructed in the 1950s.

He announced that his council was building 35 low-cost houses and ten medium houses all at a total cost of K700,000.

While building the houses, the council would destroy a few plots of maize found in the area it had already developed.

He was commenting on reports that the council had

slashed maize without giving enough compensation to owners of the fields.

The case in point was of Mr Cornelius Malube who said the council wanted to compensate him only for clearing the land instead of paying him for labour and crops.

Compensation

But Mr Mapala said: "We shall assess and see how much he should be compensated."

Several families in Dambwa township are demanding compensation from the council for destroying their maize fields in the area where houses are being constructed at a cost of K700,000.

Mr Mapala said the council was considering compensating Mr Malube who has bitterly complained over the destruction of his maize.

The town clerk said the council could not hold back development because of small patches of maize as the K700,000 Zambia National Provident Fund loan would continue accumulating interest.

People had to choose between development and lack of expansion. The list of people waiting for accommodation is over 4,000, he explained.

● An acute shortage of water hit Chichele Lodge in Mfuwe Game Park where President Kaunda and his family are on holiday.

The dry spell was caused by a breakdown of a water pump at the lodge last Saturday.

Workers from the National Hotels Development Corporation and the department of water affairs worked round the clock to restore water supply.

Shortage Gets Worse

Lusaka TIMES OF ZAMBIA in English 31 Dec 80 p 1

[Text]

MEDICAL, domestic and industrial operations came to a stand still in Livingstone yesterday as a shortage of water worsened.

Taps in homes, at Livingstone General and Botoka hospitals, clinics, factories, hotels and other institutions ran dry.

Livingstone General Hospital superintendent Dr Francisco Barung said yesterday the hospital had no water for cooking patients' food but was promised some by the council.

He said if delivered the water would only be used for cooking and sterilising instruments. If the situation continued then the hospital would be in trouble.

In the town centre, women rushed to Moth Club where they drew water from the swimming pool. "We shall boil it before using it for cooking and drinking. It is not a question of where water is coming from it is a question of survival," one woman said.

At the Fairmount Hotel, the managing director Mr Man Dhamoon said: "We can't cook for our guests, laundries can't be cleaned, toilets are blocked. Everything is in chaos here."

Mr Dhamoon said before clean water stopped flowing from the taps, there was muddy water which blocked toilets cisterns.

He said his hotel had shelved plans to stage a disco tonight on the New Year's eve because of the water problem.

The Zambezi Motel had double trouble when both electricity and water were cut off. Power was cut off on Monday night when a freak storm felled huge trees on overhead cables.

The workers said there was confusion at the hotel as people ran in different directions while the wind increased its velocity.

Many motorists had no fuel yesterday because petrol stations could not operate without electricity.

Traffic to and from Victoria Falls along the Mosi-O-Tunya Road was halted for about an hour as council workers cleared a huge tree which blocked the road.

Southern Province police chief Mr Christopher Mutemwa confirmed the death of a woman electrocuted after stepping on a live wire. The wire had been cut by a tree which fell on the electric pole.

Zesco personnel and the council's engineering department staff are working round the clock to restore electricity in the town.

CSO: 5000

NORWAY, SWEDEN BLAME NORTH SEA FIELD FOR HUGE OIL SPILL

Oil in Oslo Fjord

Stockholm DAGENS NYHETER in Swedish 3 Jan 81 p 6

[Report by Gudleif Forr, DAGENS NYHETER's special correspondent]

[Text] Oslo, Friday [2 Jan]--Two large agglomerations of oil were discovered Friday morning in the outer part of the Oslo Fjord. During the day Friday an estimated 30,000 dead sea birds were also observed along the coasts on both sides of the Oslo Fjord.

It is believed that there is a connection between the oil in the Oslo Fjord and the extensive deaths of birds along the west coast of Sweden.

The Norwegian state environmental protection agency took samples of the oil on Friday for the purpose of finding out where it came from.

One of the oil spills is 50 meters in circumference and the other is a 500 meter strip with a thin concentration of oil. Both boats and helicopters from the Norwegian side crisscrossed the harbor areas and down toward the Swedish border to make a survey of the damage. All planes that fly over the areas in the Skagerrak concerned are asked to report whether they see oil spills that may be connected with the great damages that have been discovered on both the Norwegian and the Swedish side during the last 24 hours.

The killing of sea birds was at its worst along the east coast of Norway on Friday. The Norwegians fear that we are facing the worst catastrophe for sea birds in many years. It presumably involved up to 30,000 dead sea birds of various species.

The strong inshore wind during the New Year's holiday changed by Friday and both the wind and the oil blew away from the shore. That may have saved many threatened sea birds in the area.

The Norwegian state environmental protection agency said Friday that it was still too early to say where the oil spills are coming from. The Swedish suggestions that they came from Norwegian oil installations in the North Sea, therefore, cannot be commented upon.

Spill Probably From North Sea Oilfield

Stockholm DAGENS NYHETER in Swedish 3 Jan 81 p 6

[Excerpts] "The oil in the big spill on the west coast in 1978 probably came from the oil field in the North Sea.

"The course of events in the present catastrophe is similar, and for that reason I believe that the oil is coming from the oil field this time, too."

So says Arne Rundberg, criminal inspector with the Uddevalla police. Rundberg led the police investigation of the 1978 oil spill.

"Exactly the same thing is happening now as in 1978," says Rundberg. "First the birds fly ashore, then come the helmets and other junk from the oil field, and finally the oil comes."

The investigation of the oil spill in 1978 failed to determine where the oil came from, in spite of nearly two years' work.

In connection with the oil catastrophes on the west coast and in the skerries off Stockholm in 1978, the government set up a committee of one [Sören Norrby] to oversee preparations for combatting oil.

Not all of the details are clear, but in the main the government bill [now under consideration] is based on Sören Norrby's report "Ren Tur" [Pure Luck], which was presented in the summer of 1979.

Biggest Catastrophe Ever for Sea Birds

Stockholm DAGENS NYHETER in Swedish 3 Jan 81 p 6

[Report by Peter Sandberg and Thomas Axner based on interview with Gunnar Rödström]

[Text] Smögen, Friday [2 Jan]--The danger of extensive oil damage on the west coast of Sweden seems to be over for this time. In spite of searches all day by planes and boats, no large oil slick has been sighted. Moreover, at 1600 hours Friday the wind shifted to the east. However, pessimism is now beginning to spread among coast-dwellers and environmentalists:

"It is obvious that we can hope that there will not be more oil catastrophes--but we know that there will be," says Gunnar Rödström, bird warden in Smögen.

About noon a coast guard reconnaissance plane sighted a stretch 15 miles long and 2 miles wide of a black and brown lumpy mass. The stretch, which lay along the north coast of Jutland, was then about 3 miles from the Swedish coast and the wind was northwesterly.

A Swedish patrol boat and Danish helicopters were able to establish, however, that it was only muddy water and an accumulation of thick tufts of seaweed.

To be absolutely sure, the coast guard will send a patrol boat to the area Saturday [3 January].

Planes and Boats

At the same time three patrol boats are continuing to patrol the waters off the Bohus coast. Reconnaissance planes are also kept in the air. The flights are being continued beyond a line southward from Kristiansand, Norway.

"We are also maintaining constant contact with the Norwegian environmental protection agency," says coast guard inspector Tor Schöft. "Two oil slicks that were found at the entrance to Oslo Fjord (see separate article) will be analyzed and compared with the oil on the sea birds."

Where the oil is coming from is not yet known. It may come from one of the oil platforms in the North Sea, but it is not impossible that it comes from a vessel.

"Happening Again"

"It is obvious that we can hope that there will not be more oil catastrophes of this kind, but we know that there will be as long as oil is handled as it is today," says Gunnar Rödström, bird warden in Smögen.

During Friday the shooting and collecting of oil-damaged birds continued. From the skerries and coves oil-covered birds in plastic bags were loaded into collecting containers.

"It had been hoped that it would slack off now. But toward evening more birds came in. The disturbing thing is that there are now many eiders, which are a coastal species," Gunnar Rödström says, and continues:

"I saw a flock of 150 to 200 oil-soaked birds. I was able to kill one with each barrel while the others disappeared. They were completely soaked and will die, but the eider is strong and suffers a long time. The eider does not go far from the coast, and this indicates that there is still oil close by."

Gunnar Rödström says that Sweden must take strong measures on its own or together with Norway and Denmark and demand, among other things, that all oil that is shipped to the Nordic countries is marked. Systems for that have been worked out long since, but there are no agreements.

"The politicians must not be so cowardly. We must be able to do more."

During the last few days Gunnar Rödström has been able to count up about 10,000 birds shot in Sotenäs alone. In addition the beaches and bays are thick with dead birds that have been washed ashore. Perhaps as many as have been shot.

All in all it is an unheard-of sea bird catastrophe, worse than we have ever experienced heretofore.

Oil-damaged birds have drifted ashore by the hundreds along the coasts of Halland and northern Skania. They may be being killed by the same oil that killed thousands of birds in Bohus.

"Those who phone in say that there are multitudes of birds that have been killed. I cannot say more exactly, but it amounts to hundreds of birds," says Knut Johansson, commanding officer of the Halland coast guard district.

Auks Threatened With Extinction

Stockholm DAGENS NYHETER in Swedish 3 Jan 81 p 6

[Report of interview with Olof Persson by Ingvar Andersson]

[Text] "The auks' future in the North Sea looks very dismal. If the oil damages continue as in the recent past, the species now found in the area will be eradicated during the 1990's."

So says the zoologist Olof Persson, of Göteborg University, after the recent killing of birds on the west coast.

Since the middle of the 1960's Olof Persson has followed the development of various species of birds in the coastal strip off Bohus and has specialized in part on the auks, which are now being killed in masses by the oil.

"The death of the birds is the most dramatic feature of the catastrophe," says Olof Persson, "but it must be remembered that the whole sea is damaged.

"The bottoms are destroyed and plankton and other small organisms are damaged and destroyed."

Hard To Count

Olof Persson says that it is very hard to determine how large a part of the auks in the North Sea were killed in this catastrophe, since it is not known how many birds there really are in the area.

"These species go out to sea and are very hard to count. That they live so far out is also the reason that the birds are practically unknown to the general public.

"It is conceivable that large parts of the population have already been destroyed.

"It must be assumed that considerably more birds have died than have been found on land," says Persson. "These species are built to dive for food, and are therefore relatively heavy. When the feathers are damaged by oil, many of them sink.

"One guess is that 100,000 birds perished in the last few days.

"The auks wander around the North Sea in populations that stick together, and it is probable that those that have just been killed belonged to one and the same

"bird community." It may be so bad that all birds within a large area have been completely knocked out.

"The auks also have the peculiarity that they multiply very slowly. They lay only one egg a year, and that means that a recovery of a damaged species or population goes very slowly."

At the Kristineberg Marine Biology Station in Fiskebäckskil, too, there is great concern about the effects of the oil emission on the environment.

One Egg

"A continual oil spill is going on that has led to hardly a spot on the coasts and bottoms being free of oil," says Åke Granmo at the station.

"We know from earlier studies that it can take up to 10 years before oil that has sunk to the bottom is destroyed. We also know that during that time oil causes oil damage--including various kinds of tumors--to the organisms."

Note: The auks are a family of sea birds belonging to the order Alcidae. There are about 22 species in the northern hemisphere, of which 3 breed in Sweden--the razor-billed auk, the common guillemot, and the black guillemot. Formerly the puffin also bred here, but it no longer belongs to the arctic fauna.

8815

CSO: 5000

ENVIRONMENTAL PROTECTION GROUP ESTABLISHES BRANCH

Nicosia CYPRUS MAIL in English 21 Dec 80 p 4

[Text]

THE international environmental protection group, Friends of the Earth, has formed a branch in Cyprus to give voice to the growing concern of many people at the deteriorating state of the island's environment.

In its first bulletin it states that the aim of FOE (Cyprus) will be to identify the threats to the environment, to suggest alternative courses and to apply pressure as and where necessary. It sees its prime role as that of raising the level of public awareness of environmental problems.

This first bulletin contains some hard-hitting articles and indicates that the organisation's initial campaign will be to oppose the absurdity of building an international airport at Paphos, and to press for action to save what remains of Larnaca's picturesque seafront.

Momentum of its own

FOE believes the Paphos airport would be an environmental disaster and go back to claim publishes a noise map indicating that the prime hotel area stands in the direct flightpath of the

- * The absurdity of an airport at Paphos
- * Skyscraper threat to Larnaca sea-front
- * The fly spray that contains nerve gas

runway and can expect considerable noise disturbance.

Describing the airport as the strength of environmental folly with the project gaining a momentum of its own despite opposition at all levels, including ministerial, FOE is also concerned by the low level of public awareness which has led to an almost complete lack of debate on the matter.

FOE admits that the fresh and vegetable growers in the region will benefit because they will not have to truck their produce all the way to Larnaca but this advantage must be weighed against the costs involved and the more general public interest.

The other group who expect to benefit are those in the tourist trade, but the noise level from the airport will seriously affect the present main tourist area in Kato Paphos greatly affecting the popularity of the hotels in that area. FOE points out that the runway will be large enough to handle the biggest Jumbos and that in many cases the planes will have to

fly directly over the port area, often as low as 700-800 feet which would create some 115 decibels of noise. It is also pointed out that if the airport is intended to attract freight and tourist charters, these tend, for good commercial reasons, to operate at night.

The estimated cost of £10 million is the equivalent of £20 for every man, woman and child in the Republic.

FOE argues that such sums could be far better spent, for example on improving the Larne-Loughbeg road.

It is not until the first jet scream over their town that the people of Paphos awake from their slumber, it will be too late, says the bulletin.

The FOE also reveals an application by a Larne business group to build a 14-storey block next to the Town Hall which would dominate the centre of the picturesque waterfront, destroying the atmosphere of this popular haven of the town.

Perhaps even more alarming is the revelation that a Larne company has been manufacturing an aerosol insecticide called Puff Puff which, FOE claims, contains a chemical similar to that found in wartime nerve gas. To make matters worse the manufacturers label the can can assure sales and affirm-

less to human beings and make near facts.

In fact, says FOE, the chemical - DIMP or Dichlorovinyl - is classified slightly hazardous by the World Health Organisation which he comments that aerosols containing it should carry a clear warning against their use in confined space or near children. Britain's Ministry of Agriculture rules that protective clothing and a respirator be worn when it is used in a confined space.

Fortunately, there is an injunction in force preventing the sale of Puff Puff because a British company which markets a product called Puff Puff based on a different and safe chemical, is suing the Larne firm for allegedly infringing the British product.

The FOE Bulletin is containing a number of interesting environmental articles from around the world and includes a petition for readers to sign which will be sent to the Canadian government with the aim of stopping the annual slaughter of some 180,000 baby seals.

The FOE practices what it preaches and the Bulletin is printed on 100% re-cycled paper.

The address of Friends of the Earth (Cyprus) is Maroni, Larne District.

SEWAGE TREATMENT METHOD RESPONSIBLE FOR VIRUS ILLNESSES

Copenhagen BERLINGKSE TIDENDE in Danish 13 Dec 80 p 3

[Article by J.J. Kjaergaard: "Danger of Infection from Treated Sewage Sludge"]

[Text] Many of the viral diseases which we group under the heading of influenza are perhaps spread with the wind from the sludge which is carted out as fertilizer to the fields from the many new treatment plants. This has been suggested by two young biologists, candidates of sciences Anne Lisbeth Nielsen and Birgit Lydholm from the Agricultural College's department of veterinary virology and immunology.

In Denmark 45 percent of the sludge is laid out onto the fields after having been put through a stabilization process, e.g., in putrefaction tanks in which a temperature of 30 to 35° C is reached during the development of biogas.

Together with the engineering firm COWiconsult Anne Lisbeth Nielsen and Birgit Lydholm are trying to find a reliable virus-destroying stabilization process, which can imply, for one thing, heating to 50° C.

For the purpose of safeguarding against the spread of infection it is also possible to store the sludge for several months. The Environmental Agency suggests a half year. Drying will kill many of the disagreeable forms of virus.

Hitherto the main interest has been in the sewage's content of bacteria and the foul-smelling compounds which can arise. But now these investigators have discovered that many viruses can survive the sewage treatment plant's processes. They have found in sewage and sludge many of the infectious germs which can form in the intestinal wall of humans. Unlike bacteria, viruses can multiply only by assuming the "production potential" of living cells. They cannot multiply in the sludge. On the other hand it is difficult to discover them by cultivation in the laboratory because they require a living cell culture.

A Danish solution to the problem of the undesirable spreading of human viruses through sewage will be able to be utilized in many countries, it is stated in the yearbook of the technical and scientific research council.

8985

CSO: 5000

POLL SHOWS MOST FAVOR ENDING AIR SPRAYING FOREST UNDERBRUSH

Helsinki HELSINGIN SANOMAT in Finnish 30 Oct 80 p 9

[Opinion poll by Gallup of Finland for HELSINGIN SANOMAT]

[Text] The Finnish people are unusually unanimous in the opinion that air spraying should not be used in the combat of forest underbrush. The Finnish Gallup came to this conclusion last September when opinions were polled on the initiative of HELSINGIN SANOMAT.

According to the results of the research a total of 67 percent of the Finnish people would want to prohibit air spraying entirely and 21 percent would want to authorize the commune to prohibit the air spraying in their area.

The present practice of air spraying with a special license independent of the commune was supported by 4 percent in the study and 6 percent of the Finnish people wanted a more liberal spraying practice than the present one which would depend on the land owner.

The attitude of the women was especially strict against air spraying. Of them altogether 72 percent supported total prohibition. Twenty-five percent of them thought that the discretion of the commune should be more clearly specified. Of the women only 17 percent were willing to trust the decision of the commune.

Air Spraying of Forest Underbrush

"There has lately been a discussion in our country about the combat of forest underbrush. Which of the following alternatives agrees best with your opinion?"

	<u>Percent</u>
Spraying of forest underbrush should be totally prohibited	67
Spraying of forest underbrush should be inhibited if the commune in question opposes it	21
Spraying of forest underbrush should continue to be permitted according to present practice, that is with a special license regardless of the commune's wishes	4
Air spraying should be permitted without a special license if the land owner wants it	6
No opinion	2

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CSO: 5000

ENVIRONMENT AGENCY TIGHTENS HAZARDOUS SUBSTANCES CONTROL

Oslo AFTENPOSTEN in Norwegian 9 Dec 80 p 43

[Article by Georg Parmann: "Tightened Control Over Hazardous Substances"]

[Excerpts] Control over chemical substances and products which can cause damage to health will now be intensified. Early next year new regulations will go into effect; they relate to classification of substances and products and marking and to certain rules in connection with production, importing, sales and packaging, storage and waste disposal. Together with the regulations will be presented a list with about 1000 substances which can cause damage to health. In the same way, an accompanying list with a minimum of 100 substances which can cause cancer and a list of 37 substances which can cause allergies. All these lists will gradually be expanded as work continues on gaining control over or completely banning individual harmful substances. One short-term goal is to get out of production and consumption those substances we today know can cause cancer. The cancer danger warning will presumably by itself have the effect that customary consumers will not buy these products but will choose others when possible. The regulations will to a great extent follow the guidelines in effect in EC countries.

Product Control Department Will Assume Responsibility

About the same time that new regulations regarding control of chemical substances and products which can cause damage to health go into effect, around the turn of the year according to plan, formal responsibility for administration will be transferred to the Product Control Department of the State Pollution Control Agency (SFT). Today it is the Ministry of Social Affairs which administers regulations on poisons and substances injurious to health. The Bureau of Health, at the same time, has not had the capacity to follow through and arrangements for the formal transfer to SFT have been in progress for several years.

"The proposal for the regulations was developed in close cooperation between the SFT and the Labor Commission, because chemical substances are treated both in the new work environment legislation and in the product control legislation. Last spring the proposal was sent to the authorities involved for an opinion, and the Product Control Council has now handled the matter. It will be dealt with finally in the Ministry of Environmental Protection with the intent of putting it into effect in the new year," SFT Department Head Per Amund Gulden tells AFTENPOSTEN.

"As soon as the law goes into effect all new products will be marked according to the new regulations. Producers and importers in addition will have a one-year deadline to complete the marking. But even after this previously marked products which have lain in warehouses will be able to be sold without marking them according to the regulations."

"The new marking will take place with symbols, warning notices and handling instructions which are in accordance with the conceptions of the EC countries. The proposed general list of substances for all substances which can cause damage to health is also based on the EC system but has been expanded by about 100 substances to about 1000. About 70 substances have also been classified more strictly than in the EC system. The stricter classification is due to the fact that we have used as a basis more recent research and information on poisonous substances and other supplementary medical information. Besides, we will work on the steady supplementing and expansion of this list," says Gulden.

"An important deviation from the marking system which is in use in the EC will be that we are coming out with comprehensive cancer danger marking. Marking of this sort is taking place to an insignificant degree in the EC countries. Substances which we today know can cause cancer in humans or animals will be marked with the warning 'Risk of cancer. Prolonged or repeated use increases the risk. Avoid inhaling, contact with skin or swallowing.' Today there are at least 100 substances on this list and it will be expanded gradually as new research results give a basis for this."

"Neither the general list of substances nor the other lists cover by a long shot all the substances which can have effects injurious to health. Here it is important to note that all comparable substances are to be classified in a corresponding manner. This means that if a substance is not on the list this does not excuse the producer or importer from the obligation of classification if the substance has characteristics corresponding to those of the substances on the list. In this connection it is important to note that a distinction is made between substances and products. A product can be made up of several substances. It is best, then, to know how the product as such acts in connection with health. Unless this is known the product must be evaluated on the basis of the individual substances which it is made of," says Gulden.

Guidelines have been given for how the danger to health of a product which is made up of several substances is to be estimated. As far as warning of cancer danger is concerned, the following has been suggested: If a product contains more than 0.1 percent of a substance which can cause cancer the product is to be marked for cancer danger.

The foundation of the general list of substances and the list of substances which can cause cancer and allergic reactions has been constructed on the basis of general available information on poisonous substances.

The classification of substances and the new marking system are important aspects of the new regulations. There will also be changes in the rules for selling, as compared with today's practices. There will be simplification of the rules for

permission to import or produce poisonous substances. Importers and producers must according to the new regulations instead give a declaration to the authorities regarding the products which they handle which are dangerous to health. For each individual product is to be given as complete information as possible on what the product consists of. These declarations are to go to the Occupational Hygiene Institute, where they will be registered and systematized.

These rules for business have two important purposes. They will activate the obligation of providing information and exercising care among importers and producers. In addition, the information will provide a basis for conducting possible efforts against products hazardous to health.

"It is noteworthy that the new regulations concern only substances and products hazardous to health and not substances and products harmful to the environment. Work on the latter is also under way in the SFT, and several efforts have already been made or are being worked on. Among the special efforts which have been made is the ban on PCB substances. In addition, the ban on the use of chlorofluorocarbons (aerosol propellants) goes into effect on 1 July 1981. In addition, restrictions have been enacted in the marketing of phosphate-containing detergents in the Mjøsa district," relates Gulden.

"In addition, there are a number of reports under way on other products and substances hazardous to health or to the environment. For one thing several heavy metals are being scrutinized and special work is being done on products for the home, hobbies and leisure time. We can therefore expect more bans or other restrictions to come forth in time," says Gulden.

"When the work on the new regulations for chemical substances and products has been accomplished, the Product Control Department will take on a new large area in work on limiting the adverse effects of our chemicals. This concerns tightened control of the introduction of new chemical substances on the Norwegian market. Such a system has been introduced in the USA and has been approved for introduction in EC countries. OECD is also working on elucidating possibilities for an international control system," relates Gulden.

What Do We Know About Poisons?

Work on chemical products is only one of several priority areas for the State Pollution Control Agency (SFT). "We have found it appropriate to place our main effort on the following main groups in addition to chemical products: noise, air pollutants, water pollutants and acute pollutants, which for one thing includes oil safeguards," says SFT Director Rolf Marstrander.

"We are working mainly on efforts which can contribute to reducing contaminated effluents from industry, agriculture, oil drilling, energy production, transportation and the general use of all kinds of products within and outside of the sphere of production. Originally much of the work on pollutants was directed toward a reduction in polluting effluents, especially in water and the air, from industry and agriculture."

"In recent years, however, the SFT also began to work on chemical products. This is due to two circumstances. First and foremost there is the increasing realization of the fact that chemical products can represent a danger to health or to the environment. In addition there is an increasing need to gain a greater insight into and knowledge of poisons and their effect on the organism as the basis of work in order to arrive at proper efforts against pollutants from industry, agriculture and transportation."

"This is the reason for the fact that work on chemical products today has very high priority in the State Pollution Control Agency. If the SFT is to succeed in living up to the requirements at hand there will have to be an increase in the number of staff members both in the SFT and the institutions we rely on, especially in the medical professions," says Marstrander.

Asbestos, Benzene, Hydrazine, Lead Phosphate...

Accompanying the new regulations on the control of chemical substances and products which are now under final consideration by environmental protection authorities are also eight attachments. These include, among other things, lists of various types of substances hazardous to health, classification and marking instructions, rules for the use of symbols, various risks and safety clauses and estimates of air requirements for occupational health.

8985

CSO: 5000

BRIEFS

SVALBARD OIL SPILL DAMAGE--(Norsk Telegram Byraa) An oil spill on Svalbard has had clearly harmful affects for more than 2 years after the pollution took place. This is derived from a report by SINTEF [Society for Industrial and Technical Research] on an oil spill at the Svea [coal] mine in the spring of 1978. One-hundred thirty thousand liters of diesel oil leaked from a tank facility in Svea. In 1980 contamination from the oil was still present. The study confirms that breaking down of oil on Svalbard and in other Polar areas can take a very long time. In the study it is not established that microorganisms have broken down any of the oil which ran out. [Text] [Oslo AFTENPOSTEN in Norwegian 13 Jan 81 p 64]

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9 Feb. 1981